## REMARKS

Claims 1-5, 7-12 and 14-17, as amended, remain in this application for the Examiner's review and consideration. The claims have been amended to more clearly define the scope of protection sought by the present application. Claims 1 and 9 have been amended to recite that an aging factor is assigned to each result in the second portion of the initial search results, and claims 1, 9 and 15 have been amended to recite that each aging factor comprises a rate at which the result to which it has been assigned decreases in importance. In addition, claim 15 has been amended to recite that the time-based weight comprises a rate of decay. Claim 2 has been amended to recite an embodiment of assigning a rate of decay to the time-based weight. Support for these amendments can be found in the specification as originally filed, in particular on page 9, lines 14-16, page 10, lines 20-28 and page 11, lines 5-14. As these amendments do not introduce any new matter into the above identified application, their entry at this time is warranted.

Claims 1-5, 7-12 and 14-17 were rejected under 35 U.S.C. § 112, second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention for the reasons given on pages 2-3 of the Office Action. It was asserted that it is not clear how a "rate of decay" or "an aging factor" could be assigned to a "time-based weight". Claims 1, 9 and 15 have been amended to clarify that the rate of decay is assigned to the time-based weight. As discussed in the specification on page 10, lines 4-15, the rate of decay is used in calculating the time-based weight. The rate of decay, however, is a parameter that can be set, i.e., assigned, by the administrator based on factors such as the type of data being search. Therefore, even though the rate of decay is used in the time-based weight, any one of a number of methods can be used to actually assign a desired rate of decay to the time-based weight. One such embodiment of assigning the rate of decay is currently recited in claim 2. Claims 1, 9 and 15 have been amended to clarify that an aging factor expressing the rate at which the future importance of a result decreases is also assigned to the results and used in ranking the results. Therefore, Applicant asserts that this rejection has been overcome and should be withdrawn.

Claims 1-5, 7-12 and 14-17 were rejected under 35 U.S.C. § 103 as being unpatentable over U.S. Patent Application Publication No. US2003/0135490 to Barrett et al. ("Barrett") in

view of U.S. Patent Application Publication No.US2005/0071741 to Acharya et al. ("Acharya") for the reasons stated on pages 3-8 of the Office Action. It was asserted that Barrett discloses all of the elements of the present invention as currently recited in the claims except identifying in-links associated with each search result in the second portion of the search results, associating a time-based weight with each identified in-link using at least one of a creation time and a publication date for an in-linking source containing the in-link and assigning a rate of decay to each time-based weight. Acharya was said to teach these features. Applicant asserts that this rejection has been overcome for the reasons that follow.

Barrett is directed to an enhanced popularity ranking in which the search activities of previous users are monitored, and this activity is used to organize information for future users. The user activities are monitored from a time and use based perspective. The basic technique of Barrett is to utilize the time history of uses of information. Therefore a popularity ranking is used based upon timing of previous uses. Acharya is directed to information retrieval systems in which link-based criteria may be used to generate a score associated with a document. These criteria include an age distribution associated with links pointing to a document, dates when links appear, dates when links disappear and the "dynamicness" of the links, among other factors.

In contrast, methods for ranking results in accordance with the present invention and as currently recited claims 1, 9 and 15, the only independent claims, are based upon in-links associated only with search results having creation dates before a pre-determined threshold date. A time-based weight is associated with each identified in-link using either the creation time, the publication date or both the creation time and a publication date for the in-linking source containing that in-link. In addition, a rate of decay is assigned to each time-based weight, and an aging factor is assigned to each result. The aging factor expresses a rate at which a result decreases in importance. Therefore, the aging factor expresses a future importance weight. The time-based weight and the aging factors are used to rank the second portion of the initial set of search results. The time-based weights and aging factors provide an indication of the current and future quality of sources that link to a given document and are used to determine the weight or relevance of document in response a query. As stated in the specification, "the age or date of a given result . . . can be based on . . . the dates on which the result is referenced or linked to by

others, i.e., the dates that each in-link is created" page 8, lines 26-29. Since higher quality resources will have more overall in-links and recent as well as older in-links, an evaluation of the age of in-links provides an assessment of the quality of a given search result. In addition, source documents containing the in-links that are newer and that retain their relevance for longer periods of time lend increased weight to the documents to which they link.

The time history of uses in Barrett is not in-link data and does not utilize the existence or age of in-links to a given search result. The history of uses is based upon how often, when and for how long a given result or webpage is viewed. As currently recited in claims 1 and 9, an initial set of search results is generated, and two portions of this set of search results are identified, a first portion and a second portion based upon the creation dates of each result. The first portion of the initial search results has creation dates after a pre-determined threshold date, and the second portion of the initial search results has creation dates before the pre-determined threshold date. The second portion results, i.e. the results having creation dates before the threshold date, are ranked based on the time based weights and aging factors. There is no teaching or suggestion in Barrett of making any rankings based upon in-link data. Moreover, Barrett fails to teach or disclose first sorting search results into two groups based upon age followed by ranking the search results based on in-link data. Although Acharya teaches the use of in-links to score documents, Acharya fails to teach or disclose the use of a time based weight for each in-link based on the creation or publication date of the underlying source document containing the link in combination with an aging factor to rank a portion of the search results having a creation date before a threshold date.

All of the remaining claims depend either directly or indirectly from claims 1, 9 and 15 and contain additional recitations that further define the present invention over Barrett and Acharya. Claim 2 as currently amended recites an embodiment of assigning the rate of decay to the time based weight. In particular, a rate of decay to be assigned to the time based weight is chosen experimentally by dividing the search results into a newer group comprising results created within a recent period of time and an older group comprising all remaining results. A weighted time rank is assigned to each result in the older group using each one of a plurality of potential rates of decay. A second ranking is assigned to each result in the older group based on a

number of in-links to that result from results in the newer group, and for each potential rate of decay, a difference is calculated between the assigned weighted time rank and the assigned second ranking over all results in the older group. Thus a group of calculated differences are obtained, and each difference is associated with one of the potential rates of decay. The potential rate of decay that minimizes the calculated difference between the weighted time rank and the second ranking is identified, and it is this identified potential rate of decay that is assigned to each time-base weight. There is no teaching or suggestion is with Barrett or Acharya regarding the specifics of how rates of decay are calculated or in particular regarding the experimentally calculated rate of decay as currently recited in claim 2. Since Barrett in combination with Acharya fails to disclose or teach all of the recitations of the claims as presently amended, the present rejection has been overcome and should be withdrawn.

Applicant asserts that all claims are now in condition for allowance, early notification of which is respectfully requested. As the present amendments do not introduce any new claims above the original number of filed claims, no fees are believed due for the submission of this amendment. No other fees are believed due.

Respectfully submitted,

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